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<p>2000-014350/02 A12 F01 G02 (A26) BADI 1998.05.14          BASF AG *DE 19821477-A1          1998.05.14 1998-1021477(+1998DE-1021477) (1999.11.18) C08L          59/00, C08J 3/20, 5/00, 5/18, D01F 6/50, C08L 101/12, C08K 3/34, 7/02  <b>Thermoplastic nanocomposite, useful for the production of film, fiber, molded articles or coatings</b>  <b>C2000-003060</b>          Addnl. Data: GLUECK A, GRUTKE S, QUEISSER J</p>	<p>A(4-A5, 4-C4A, 4-G1A, 8-M9B, 8-S1) F(1-D5, 1-D10, 3-C) G(2-A2D) <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">9</span></p> <p>molded articles or coatings (claimed).</p> <p><b>ADVANTAGE</b>          The nanocomposite (I) has improved mechanical and surface properties.</p>
<p><b>NOVELTY</b>          A thermoplastic nanocomposite (I) contains: (A) 50-99.99 wt.% of a carbon monoxide polymer of carbon monoxide and an olefinically unsaturated compound; (B) 0.01-50 wt.% of a delaminated layer silicate; (C) 0-40 wt.% of a fibrous filler; (D) 0-30 wt.% other additives; and (E) 0-30 wt.% of an elastomeric rubber polymer.</p> <p><b>DETAILED DESCRIPTION</b>          Independent Claims are included for: (i) A process for the production of (I) by preparing (A) in the presence of (B); (ii) film, fiber, molded articles or coatings prepared from (I).</p> <p><b>USE</b>          The nanocomposite (I) is useful for the production of film, fiber,</p>	<p><b>EXAMPLE</b>          A suspension of montmorillonite (29 g), alkyl-n-hexylamine (7.1 g) and p-toluenesulfonic acid (9.3 g) in methanol (4l) was stirred at 75°C for 6 hours and allowed to cool to room temperature. Propene (440 g) with a 1:1 mixture of CO and ethene was added to a total pressure of 70 bar and stirred at 90°C followed by the addition of 1,3-bis(diphenylphosphino)propane-palladium (II) acetate (0.025 g) and p-toluenesulfonic acid (0.14 g) in methanol (50 ml). The pressure was increased to 100 bar and the reaction carried out for 7 hours followed by cooling, filtering the product, washing with acetone and methanol and drying (80°C, vacuum) to yield 640 g of polymer product. The resulting polymer had an E-modulus of 5.4 GPa extension at break of 2.5%, breaking strength of 86.6 MPa (ISO 527-2) melt, index</p> <p style="text-align: right;">DE 19821477-A+</p>

(ISO1133) of 97.1 g/10 min. toughness (ISO 179/1eU) of 37.9 kJ/sq.m, heat deflection temperature (ISO 75-21) of 203°C and very good gloss (ISODIN 67530).

#### TECHNOLOGY FOCUS

Polymers - Preferred Composition: (A) is a binary or ternary linear alternating copolymer of carbon monoxide and ethylene, propene, 1-butene, 1-pentene, 1-propene, 1-hexene, 1-octene or styrene. (A), (B) and optionally (C), (D) and (E) are mixed at 160-260°C.  
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